

## NOTICE OF AMENDMENT

### **CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

May 29, 2015

Mr. Rick Ross  
Senior Vice President, Operations  
Whiting Petroleum Corporation  
1700 Broadway, Suite 2300  
Denver, Colorado 80290-2300

**CPF 3-2015-5005M**

Dear Mr. Ross:

On June 9 – 13, 2014, representatives of the Central Region office of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code inspected the operation and maintenance (O&M) procedures for Whiting Petroleum Corporation (Whiting) at your offices in Dickinson, North Dakota.

On the basis of the inspection, PHMSA has identified the apparent inadequacies found within Whiting's plans or procedures, as described below:

**1. §195.402 Procedural Manual for Operations, Maintenance and Emergencies.**

**§195.402(a) - General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline system commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.**

Whiting's procedures were inadequate because the procedures should have more detail on how Whiting will ensure that the relevant O&M procedures are kept at locations where the O&M activity is conducted.

**2. §195.402(a) – See above**

**§195.54 Accident reports. (b) Whenever an operator receives any changes in the information reported or additions to the original report on DOT Form 7000-1, it shall file a supplemental report within 30 days.**

Whiting's procedure is inadequate because it did not contain the requirement to submit a supplemental report within 30 days. The procedure should indicate that this be done whenever Whiting receives any changes in the information reported, or additions to the original report.

**3. §195.402 - Procedural manual for operations, maintenance, and emergencies.**

**§195.402(c) - Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:**

**(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.**

**§195.422 Pipeline Repairs. - (a) Each operator shall, in repairing its pipeline systems, insure that the repairs are made in a safe manner and are made so as to prevent damage to persons or property.**

**§195.226 Welding: Arc burns.**

**(a) Each arc burn must be repaired.**

**(b) An arc burn may be repaired by completely removing the notch by grinding, if the grinding does not reduce the remaining wall thickness to less than the minimum thickness required by the tolerances in the specification to which the pipe is manufactured. If a notch is not repairable by grinding, a cylinder of the pipe containing the entire notch must be removed.**

Whiting's procedures are inadequate because they did not contain any procedures for removing arc burns. The procedure should include steps for checking the arc burns with ammonium persulfate and rechecking the wall thickness after grinding.

**4. §195.402(c) – See Above**

**§195.230 Welds: Repair or removal of defects.**

**(a) Each weld that is unacceptable under §195.228 must be removed or repaired. Except for welds on an offshore pipeline being installed from a pipe lay vessel, a weld must be removed if it has a crack that is more than 8 percent of the weld length.**

**(b) Each weld that is repaired must have the defect removed down to sound metal and the segment to be repaired must be preheated if conditions exist which would adversely affect the quality of the weld repair. After repair, the segment of the weld that was repaired must be inspected to ensure its acceptability.**

**(c) Repair of a crack, or of any defect in a previously repaired area must be in accordance with written weld repair procedures that have been qualified under §195.214. Repair procedures must provide that the minimum mechanical properties specified for the welding procedure used to make the original weld are met upon completion of the final weld repair.**

Whiting's procedure in the O&M manual was inadequate because it was a re-statement of the code. The procedure should reference the repair section of the O&M.

**5. §195.402(c) – See Above**

**§195.234 Welds: Nondestructive testing.**

**(b) Any nondestructive testing of welds must be performed-**

- (1) In accordance with a written set of procedures for nondestructive testing; and**
- (2) With personnel that have been trained in the established procedures and in the use of the equipment employed in the testing.**

Whiting's procedure in the O&M manual was inadequate because it did not reference Form 195.234(b)(1) which identifies what is required to qualify NDT personnel.

**6. §195.402 Procedural Manual for Operations, Maintenance and Emergencies.**

**§195.402(c) indicates that the manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:**

**(4) Determining which pipeline facilities are located in areas that would require an immediate response by the operator to prevent hazards to the public if the facilities failed or malfunctioned.**

Whiting's procedure in the O&M was inadequate because it did not identify which facilities require an immediate response. Section 5.2 of the Pipeline Specific O&M should include a statement that all areas of the pipeline will be responded to in the same manner.

**7. 195.402 Procedural Manual for Operations, Maintenance and Emergencies.**

**(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:**

**(5) Analyzing pipeline accidents to determine their causes.**

Whiting's procedure for this requirement was inadequate because the failure investigation section of the Environmental Health and Safety (EHS) investigation process should also include procedures for preservation of the failure piece, custody of transfer, and metallurgical protocols.

**8. 195.402 Procedural Manual for Operations, Maintenance and Emergencies.**

**(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:**

**(9) In the case of facilities not equipped to fail safe that are identified under §195.402(c)(4) or that control receipt and delivery of the hazardous liquid or carbon dioxide, detecting abnormal operating conditions by monitoring pressure, temperature, flow or other appropriate operational data and transmitting this data to an attended location.**

Whiting's procedure was inadequate because it did not indicate that the facilities at Belfield and Skunk Hill are remotely monitored during receipt and delivery by Belfield Oil Control 24-hours-a-day.

**9. 195.402 Procedural Manual for Operations, Maintenance and Emergencies.**

**(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:**

**(11) Minimizing the likelihood of accidental ignition of vapors in areas near facilities identified under paragraph (c)(4) of this section where the potential exists for the presence of flammable liquids or gases.**

Whiting's procedure was inadequate because in the pipeline OPA emergency response manual, there should be added measures for minimizing the accidental ignition of vapors (e.g.: hot work permits, no smoking signs, fire extinguishers, etc.).

**10. 195.402 Procedural Manual for Operations, Maintenance and Emergencies.**

**(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:**

**(12) Establishing and maintaining liaison with fire, police, and other appropriate public officials to learn the responsibility and resources of each government organization that may respond to a hazardous liquid or pipeline emergency and acquaint the officials with the operator's ability in responding to a hazardous liquid or carbon dioxide pipeline emergency and means of communication.**

Whiting's procedures for this section were inadequate because they need to include more detail on what Whiting personnel will do. There is no detail on how often Whiting personnel will meet, or how they can meet the requirements. During the inspection, it was evident that Whiting does quite a bit of liaison. The procedures should reflect what they do.

**11. §195.402 Procedural Manual for Operations, Maintenance and Emergencies.**

**(e) Emergencies. The manual required by paragraph (a) of this section must include procedures for the following to provide safety when an emergency condition occurs;**

**(9) Providing for a post-accident review of employee activities to determine whether the procedures were effective in each emergency and taking corrective action where deficiencies are found.**

Whiting's procedures in the Emergency Response/OPA plan were inadequate because there was no requirement for a post-accident critique in Section 3.

**12. §195.402 Procedural Manual for Operations, Maintenance and Emergencies.**

**§195.402(a) - General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline system commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.**

**§195.403 Emergency Response Training.**

**(a) Each operator shall establish and conduct a continuing training program to instruct emergency response personnel to:**

**(1) Carry out the emergency procedures established under 195.402 that relate to their assignments;**

**(2) Know the characteristics and hazards of the hazardous liquids or carbon dioxide transported, including, in case of flammable HVL, flammability of mixtures with air, odorless vapors, and water reactions;**

**(3) Recognize conditions that are likely to cause emergencies, predict the consequences of facility malfunctions or failures and hazardous liquids or carbon dioxide spills, and take appropriate corrective action;**

**(4) Take steps necessary to control any accidental release of hazardous liquid or carbon dioxide and to minimize the potential for fire, explosion, toxicity, or environmental damage; and**

**(5) Learn the potential causes, types, sizes, and consequences of fire and the appropriate use of portable fire extinguishers and other on-site fire control equipment, involving, where feasible, a simulated pipeline emergency condition.**

**(b) At the intervals not exceeding 15 months, but at least once each calendar year, each operator shall:**

**(1) Review with personnel their performance in meeting the objectives of the emergency response training program set forth in paragraph (a) of this section; and**

**(2) Make appropriate changes to the emergency response training program as necessary to ensure that it is effective.**

**(c) Each operator shall require and verify that its supervisors maintain a thorough knowledge of that portion of the emergency response procedures established under 195.402 for which they are responsible to ensure compliance.**

Whiting's procedure in the O&M manual was inadequate because it did not address the regulations. Procedures must be detailed so that company personnel know what they need to do in order to meet the requirements of the regulations.

**13. §195.402 (See above)**

**§195.404 Maps and Records.**

**a) Each operator shall maintain current maps and records of its pipeline systems that include at least the following information;**

**(2) All crossings of public roads, railroads, rivers, buried utilities, and foreign pipelines.**

Whiting's procedure was inadequate because Whiting does not have a process to ensure that any foreign utility crossing their pipeline is tracked and mapped.

**14. §195.402 (See above)**

**§195.404 Maps and Records.**

**b) Each operator shall maintain for at least 3 years daily operating records that indicate-**

**(1) The discharge pressure at each pump station;**

Whiting's procedures were inadequate because they do not indicate that 3 years of discharge records must be kept.

**15. §195.402 (See above)**

**§195.424 Pipe movement.**

**(a) No operator may move any line pipe, unless the pressure in the line section involved is reduced to not more than 50 percent of the maximum operating pressure.**

Whiting's procedures were inadequate because the O&M manual did not contain a procedure for pipe movement. The procedures must include precautions to be taken such as reducing pressures to 50% of the MOP. Alternatively, the procedures should explicitly state that Whiting does not move line pipe.

**16. §195.402 (See above)**

**§195.428 Overpressure safety devices and overfill protection systems**

**(a) Except as provided in paragraph (b) of this section, each operator shall, at intervals not exceeding 15 months, but at least once each calendar year, or in the case of pipelines used to carry highly volatile liquids, at intervals not to exceed 7½ months, but at least twice each calendar year, inspect and test each pressure limiting device, relief valve, pressure regulator, or other item of pressure control equipment to determine that it is functioning properly, is in good mechanical condition, and is adequate from the standpoint of capacity and reliability of operation for the service in which it is used.**

Whiting's procedure was inadequate because it did not detail what the Company does to ensure that the regulating and overpressure protection devices operate reliably on an annual basis. The procedure does not include step-by-step guidance on how to check the regulating and overpressure protection for the system. For instance, Whiting utilizes transmitters and PLCs for overpressure protection. The method that is utilized to ensure that all devices are working and the communication lines between them are intact should be detailed in the procedures.

**17. §195.402 (See above)**

**§195.428 Overpressure safety devices and overfill protection systems**

**(d) After October 2, 2000, the requirements of paragraphs (a) and (b) of this section for inspection and testing of pressure control equipment apply to the inspection and testing of overfill protection systems.**

Whiting's procedure for checking the overfill protection device for the breakout tank was inadequate because there was no step-by-step detail on what needed to be done and documented.

**18. §195.402 (See above)**

**§195.432 Inspection of in-service breakout tanks.**

**(b) Each operator must inspect the physical integrity of in-service atmospheric and low-pressure steel aboveground breakout tanks according to API Standard 653 (incorporated by reference, see § 195.3). However, if structural conditions prevent access to the tank bottom, the bottom integrity may be assessed according to a plan included in the operations and maintenance manual under §195.402(c)(3).**

Whiting's procedure was inadequate because it did not address some of the breakout tanks inspection criteria or intervals per API 653 (e.g.: five year inspections and out of service inspections). The breakout tanks in the Whiting system fall under Section (b) and (c) of the code which requires inspection and maintenance per API 653.

**19. §195.402 (See above)**

**§195.436 Security of facilities.**

**Each operator shall provide protection for each pumping station and breakout tank area and other exposed facility (such as scraper traps) from vandalism and unauthorized entry.**

Whiting's procedure for security of pump stations is inadequate because it does not provide enough guidance on how to meet the requirement. It is also recommended that Whiting put in conditions when fencing is not required (e.g.: rural areas or when there is 24-hour surveillance of the station and valves.)

**20. §195.402 (See above)**

**§195.440 Public awareness**

**(d) The operator's program must specifically include provisions to educate the public, appropriate government organizations, and persons engaged in excavation related activities on:**

**(4) Steps that should be taken for public safety in the event of a hazardous liquid or carbon dioxide pipeline release;**

Whiting's procedures in the Public Awareness Plan were inadequate because it did not delineate the steps to be taken for public safety in the event of a hazardous liquid pipeline release.

**21. §195.402 (See above)**

**§195.442(c) Damage Prevention Program – The damage prevention program required by paragraph (a) of this section must, at a minimum:**

**(c) The damage prevention program required by paragraph (a) of this section must, at a minimum:**

**(3) Provide a means of receiving and recording notification of planned excavation activities.**

**(4) If the operator has buried pipelines in the area of excavation activity, provide for actual notification of persons who give notice of their intent to excavate of the type of temporary markings to be provided and how to identify the markings.**

**(5) Provide for temporary marking of buried pipelines in the area of excavation activity before, as far as practical, the activity begins.**

**The procedures in the O&M manual (which refers to the PAP plan) should be expanded to include excavators found during patrols.**

Whiting's procedures were inadequate because the O&M manual references Section 8, which is incorrect; it should be Appendix D. Also, the manual indicates that the procedures that cover (c)(3)-(c)(5) are "best practice." These should not be noted as best practices, but actual procedures.

**22. §195.402 (See above)**

**§195.452 Pipeline integrity management in high consequence areas.**

**(f) What are the elements of an integrity management program? An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:**

**(1) A process for identifying which pipeline segments could affect a high consequence area;**

Whiting's procedures for identifying pipeline segments which could affect a high consequence area were inadequate. For identification of release locations and spill volumes, the process did not take into consideration several factors such as leak detection and response times; failure hole size (full guillotine cut), and calculation of drain down time. Additionally, nothing in this section addressed pipeline facilities (pump stations and/or breakout tanks). Whiting utilizes an HCA analysis document, which should be added to the IMP manual. Whiting's procedure should also address the following:

- For the overland spread of liquid pool, the process did not indicate what results were generated and what records were to be kept.
- For water transport, the process made no mention of consideration of stream properties (e.g.: stream conditions, flow characteristics, seasonal conditions). Additionally, it could not be determined if the process took into account the topography features (e.g.: gully's, dry stream beds, farm tiles).
- For air dispersion, the plan should indicate that Whiting does not transport HVLs in this crude oil pipeline; however, an air dispersion analysis should be considered because of the higher vapor pressure of the Bakken crude.
- For indirect analysis, the process explains what an indirect analysis is, but does not detail what Whiting does. The process should detail what Whiting does for this evaluation and detail what output is generated through this process.
- Lastly, the process does not indicate what HCA's need to be identified before the pipeline begins operation.

### 23. §195.402 (See above)

#### **§195.452 Pipeline integrity management in high consequence areas.**

**f) What are the elements of an integrity management program? An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:**

**(6) Identification of preventive and mitigative measures to protect the high consequence area (see paragraph (i) of this section).**

Whiting's preventive and mitigative procedure for leak detection capability in Section 7.9 and 7.10, and Form 452-71 were deficient because the procedure just stated that they will fill out the form, which contains the factors in the code that must be considered. There should be more detail in the procedure on what must be done. During the inspection, Whiting indicated that a lot of operator actions are detailed in the Control Room Management plan and would add a more direct reference to that plan.

### 24. §195.402 (See above)

#### **§195.561 When must I inspect pipe coating used for external corrosion control?**

- (a) You must inspect all external pipe coating required by Sec. 195.557 just prior to lowering the pipe into the ditch or submerging the pipe.**
- (b) You must repair any coating damage discovered.**

Whiting's procedures in the O&M manual were inadequate. More detailed procedures are needed for jeeeping the pipe. The manual indicates that this procedure only applies to boring or adverse ditch conditions, which is incorrect. This procedure applies anytime pipe is installed. The O&M manual also lacked procedures for properly repairing holidays found during the jeeeping process (patch sticks, two-part).

**25. §195.402 (See above)**

**§195.567 Which pipelines must have test leads and what must I do to install and maintain the leads?**

- (c) Maintenance. You must maintain the test lead wires in a condition that enables you to obtain electrical measurements to determine whether cathodic protection complies with Sec. 195.571.**

Whiting's procedure was inadequate because it did not include a requirement that all test points leads will be maintained to ensure electrical conductivity.

**26. §195.402 (See above)**

**§195.573 What must I do to monitor external corrosion control?**

- (c) Breakout tanks. You must inspect each cathodic protection system used to control corrosion on the bottom of an aboveground breakout tank to ensure that operation and maintenance of the system are in accordance with API Recommended Practice 651. However, this inspection is not required if you note in the corrosion control procedures established under Sec. 195.402(c)(3) why compliance with all or certain operation and maintenance provisions of API Recommended Practice 651 is not necessary for the safety of the tank.**

Whiting's corrosion procedures are inadequate because they do not contain sufficient guidance on how to check the cathodic protection of the tank bottoms. The procedure must detail how Whiting will meet the requirement to monitor the cathodic protection of tank bottoms.

**27. §195.402 (See above)**

**§195.575 Which facilities must I electrically isolate and what inspections, tests, and safeguards are required?**

- (b) You must install one or more insulating devices where electrical isolation of a portion of a pipeline is necessary to facilitate the application of corrosion control.**

Whiting's corrosion procedures are inadequate because they did not contain sufficient guidance on the installation and maintenance of the insulating devices.

**28. §195.402 (See above)**

**§195.585 What must I do to correct corroded pipe?**

**(a) General corrosion. If you find pipe so generally corroded that the remaining wall thickness is less than that required for the maximum operating pressure of the pipeline, you must replace the pipe. However, you need not replace the pipe if you-**

- (1) Reduce the maximum operating pressure commensurate with the strength of the pipe needed for serviceability based on actual remaining wall thickness; or**
- (2) Repair the pipe by a method that reliable engineering tests and analyses show can permanently restore the serviceability of the pipe.**

**(b) Localized corrosion pitting. If you find pipe that has localized corrosion pitting to a degree that leakage might result, you must replace or repair the pipe, unless you reduce the maximum operating pressure commensurate with the strength of the pipe based on actual remaining wall thickness in the pits.**

Whiting's procedure for corrective action was inadequate because the procedure did not include more detail on what needs to be done to reduce the MOP due to localized and general corrosion.

**29. §195.402 (See above)**

**§195.575 Which facilities must I electrically isolate and what inspections, tests, and safeguards are required?**

- a) You must electrically isolate each buried or submerged pipeline from other metallic structures, unless you electrically interconnect and cathodically protect the pipeline and the other structures as a single unit.**
- (b) You must install one or more insulating devices where electrical isolation of a portion of a pipeline is necessary to facilitate the application of corrosion control.**
- (c) You must inspect and electrically test each electrical isolation to assure the isolation is adequate.**

Whiting's procedure is inadequate because it does not provide any guidance or steps to address electrical isolation and how to test for it.

Response to this Notice

This Notice is provided pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.237. Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Compliance Proceedings*. Please refer to this document and note the response options. Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive

material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b). If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue a Final Order.

If, after opportunity for a hearing, your plans or procedures are found inadequate as alleged in this Notice, you may be ordered to amend your plans or procedures to correct the inadequacies (49 C.F.R. § 190.237). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within 90 days of receipt of this Notice. This period may be extended by written request for good cause. Once the inadequacies identified herein have been addressed in your amended procedures, this enforcement action will be closed.

It is requested (not mandated) that Whiting Petroleum Corporation maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to Allan C. Beshore, Director, Central Region, OPS, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 3-2015-5005M** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Allan C. Beshore  
Director, Central Region, OPS  
Pipeline and Hazardous Materials Safety Administration

Enclosure: *Response Options for Pipeline Operators in Compliance Proceedings*